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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Hideaki Nagai

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EXAMINER

HINZE, LEO T

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/582,540	Applicant(s) NAGAI, HIDEAKI	
	Examiner LEO HINZE	Art Unit 2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 October 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20060609</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 5-7 are objected to because of the following informalities:
 - a. Regarding claims 5 and 6, an equation appears between claims 5 and 6 that is not part of either claim, and should be deleted.
 - b. Regarding claim 6, it appears that “with” in line 22 should be “width.”
Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
 - a. Both claims 1 and 6 contain the phrase “such as” when describing control quantities that may be controlled in the claim recitation “calculations are executed on control quantities such as an ink key opening and an ink source roller rotation speed.” This imprecise language of “such as” makes it impossible to determine with certainty the scope of the claims. To expedite prosecution, the examiner will interpret this to instead mean “the control quantity of an ink key opening.”

Appropriate correction and/or clarification is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 6 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Brydges et al., US 6,564,714 B2 (hereinafter Brydges).

a. Regarding claim 1, Brydges teaches a tone control method in a printing machine wherein calculations are executed the control quantities of an ink key opening, on the basis of prescribed positions in a target print matter and the actual positions in the actually printed matter, said actual positions being corresponding to said prescribed positions (col. 1, lines 17-22), which comprises the steps of:

calculating dot area rate in said target print matter, on the basis of an upstream process data (“colorimetric coordinates of the test swatch or image area are compared to those of a corresponding target swatch,” col. 4, lines 62-66);

selectively integrating and averaging along a paper transport direction within a ink key width calculated process dot area rate greater than a prescribed threshold and spectral reflection rate in said actually printed matter (“calculating the spectral reflectance factor,” col. 4, lines 15-18; values are inherently integrated and averages over the values recorded for each pixel, or other basic minimum measurement unit, of the integrator and averager as it inspects the target area);

calculating said ink key opening and said ink source roller rotation speed, on the basis of said dot area rate and said spectral reflection rate obtained by said selective integrating and averaging (“controlling ink flow at the printing press using the correction value,” col. 7, lines 25-26).

b. Regarding claim 2, Brydges teaches the method of claim 1, as discussed in the rejection of claim 1 above. Brydges also teaches wherein said prescribed positions in said target print matter and said actual positions in said actually printed matter are determined correspondingly with each other in such a manner that: one template image is generated, on the basis of said upstream process data (the “target swatch” of col. 4, line 64) and one matching images are generated, on the basis of said upstream process data (the “test swatch” of col. 4, line 63); and a template matching is executed by using said template images and said matching images (it is inherently required in the comparison that the comparison is made between two corresponding positions on the target and test swatches to ensure that a proper comparison of values is made, so as to subsequently effectuate an optimal adjustment of the inking system).

c. Regarding claim 3, Brydges teaches the method of claim 1, as discussed in the rejection of claim 1 above. Brydges also teaches wherein weights are lent on a result of said elective integration and averaging, corresponding to said dot area rate (the calculations set forth in col. 4, line 52 through col. 5, line 55 show that appropriate weight is given each of the values for the separate colors so as to ensure that the inking is properly adjusted to effectuate optimal printed output).

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d. Regarding claim 4, Brydges teaches the method of claim 1, as discussed in the rejection of claim 1 above. Brydges also teaches wherein: standard single color spectral dot densities at a prescribed area rate $D_c(\lambda)$, $D_m(\lambda)$, $D_y(\lambda)$ and $D_k(\lambda)$ for cyan (C), magenta (M), yellow (Y) and black (K), respectively, at a wavelength λ are defined [“calculating the spectral reflectance value, ... wavelength by wavelength,” col. 4, lines 15-19; also, Fig. 4]; ink contents t_c , t_m , t_y and t_k for cyan (C), magenta (M), yellow (Y) and black (K), respectively, at said wavelength λ are defined [“the method converts a spectral reflectance difference directly into either solid ink density or ink layer thickness,” col. 2, lines 56-58]; mixed color spectral dot density $D(\lambda)$ is defined for said wavelength λ . [“the spectral differences are then converted directly to solid ink density corrections using a liner matrix equation,” col. 5, lines 22-24]; a multiple regression calculation is executed by using formula, on the basis of said process dot area rate and said spectral reflection rate averaged by said selective integration and averaging; said ink contents t_c , t_m , t_y and t_k are calculated [Equation 1, col. 5, lines 25-35]; and calculating said ink key opening and said ink source roller rotation speed [“controlling ink flow at the printing press using the correction value,” col. 7, lines 25-26].

e. Regarding claim 6, Brydges teaches a tone control apparatus in a printing machine which comprises:

an ink key control means for controlling an ink key opening in said printing machine (“an ink key,” col. 3, line 58);

an ink source roller control means for controlling an ink source roller rotation speed (undisclosed ink roller speed control is present, to, for example control speed of printing machine from zero, i.e. stopped, to full printing speed);

an upstream digital data memory for storing process data made at an upstream ("target spectral reflectance," Fig. 3);

a spectral reflection rate data memory for storing spectral reflection rate data measured from a sample printed by said printing machine ("measured spectral reflectance," Fig. 3);

a calculation unit ("delta spectral reflectance," Fig. 3); and

a control apparatus for instructing said ink key control means and said ink source roller to control said tone ("controlling ink flow at the printing press using the correction value," col. 7, lines 25-26),

by making said calculation unit calculate dot area rate along a paper transport direction per a width of said ink key on the basis of said upstream digital data ("correction matrix" and "linear color mixing model," Fig. 3),

making said calculation unit execute a selective integral and averaging of said dot area rate calculated on the basis of said process data stored in said upstream digital data memory and said dot area rate in an actually printed matter along said paper transport direction per said width of said ink key (col. 4, line 52 through col. 5, line 55),

making said calculation unit calculate control quantities of said ink key opening in said printing machine, on the basis of said dot area rate and said spectral reflection rate

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obtained by said selective integral and averaging ("controlling ink flow at the printing press using the correction value," col. 7, lines 25-26).

f. Regarding claim 7, Brydges teaches the apparatus of claim 6, as discussed in the rejection of claim 6 above. Brydges also teaches a template image memory for storing a template image selected and generated by said control apparatus on the basis of said upstream digital data; and a matching image memory for storing a matching image selected and generated by said control apparatus on the basis of said spectral reflection rate measured from said sample, wherein said control apparatus executes a matching of said matching image with said template image and calculates a positional relation between said upstream data and said sample printed by said printing machine (the "target swatch" of col. 4, line 64; the "test swatch" of col. 4, line 63; it is inherently required in the comparison that the comparison is made between two corresponding positions on the target and test swatches to ensure that a proper comparison of values is made, so as to subsequently effectuate an optimal adjustment of the inking system).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brydges in view of Steinbacher, US 6,422,142 B2 (hereinafter Steinbacher).

Brydges teaches the method of claim 1, as discussed in the rejection of claim 1 above.

Brydges does not teach wherein, when an ink content is varied from a prescribed threshold: a water source roller rotation speed and a fluctuation of a going and returning roller are controlled.

Steinbacher teaches that in the regulation of inking, dampening duct roller speed is an important factor in controlling proper print outcome (col. 5, lines 57-60).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Brydges to also account for dampening roller rotation speed, because Steinbacher teaches that dampening roller rotation speed has an effect on proper inking, and one having ordinary skill in the art would predictably want to control as many parameters as possible to ensure proper inking.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leo T. Hinze whose telephone number is 571.272.2864. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571.272.2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Leo T. Hinze
Patent Examiner
AU 2854
06 June 2011

/Judy Nguyen/
Supervisory Patent Examiner, Art Unit 2854